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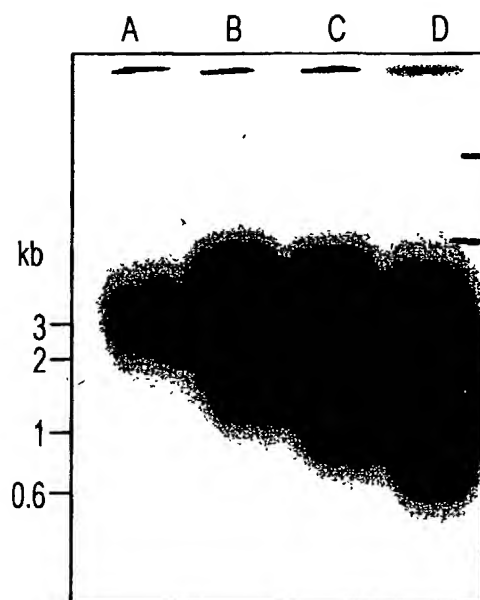


FIG. 1

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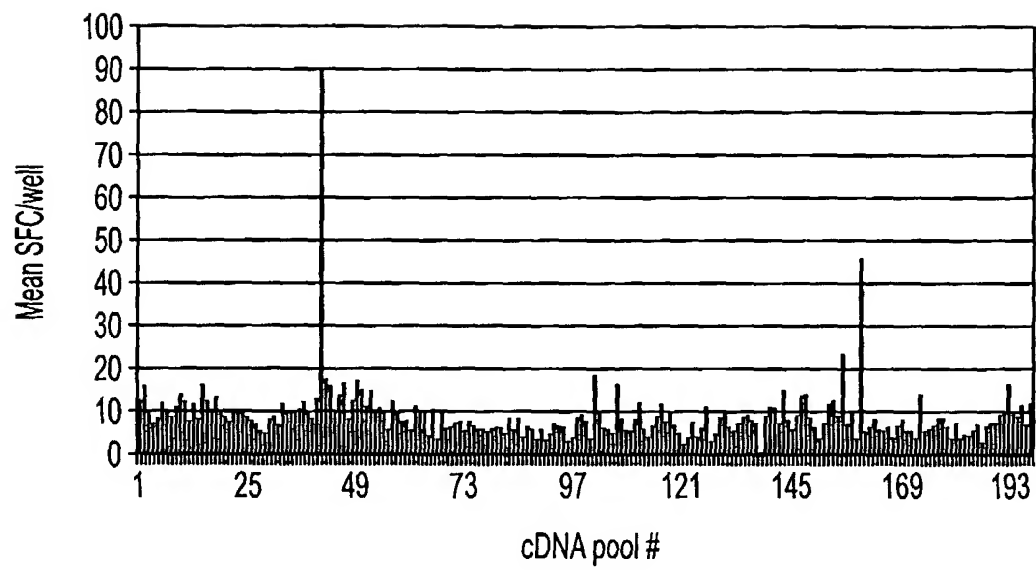


FIG. 2

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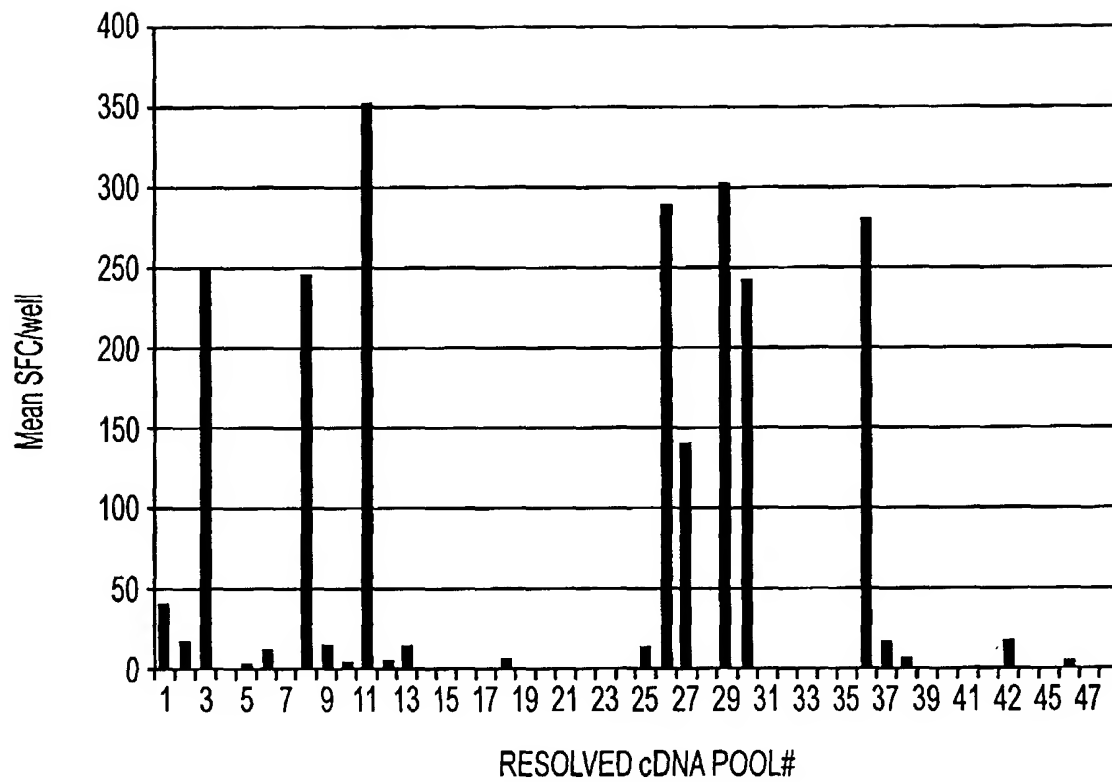


FIG. 3

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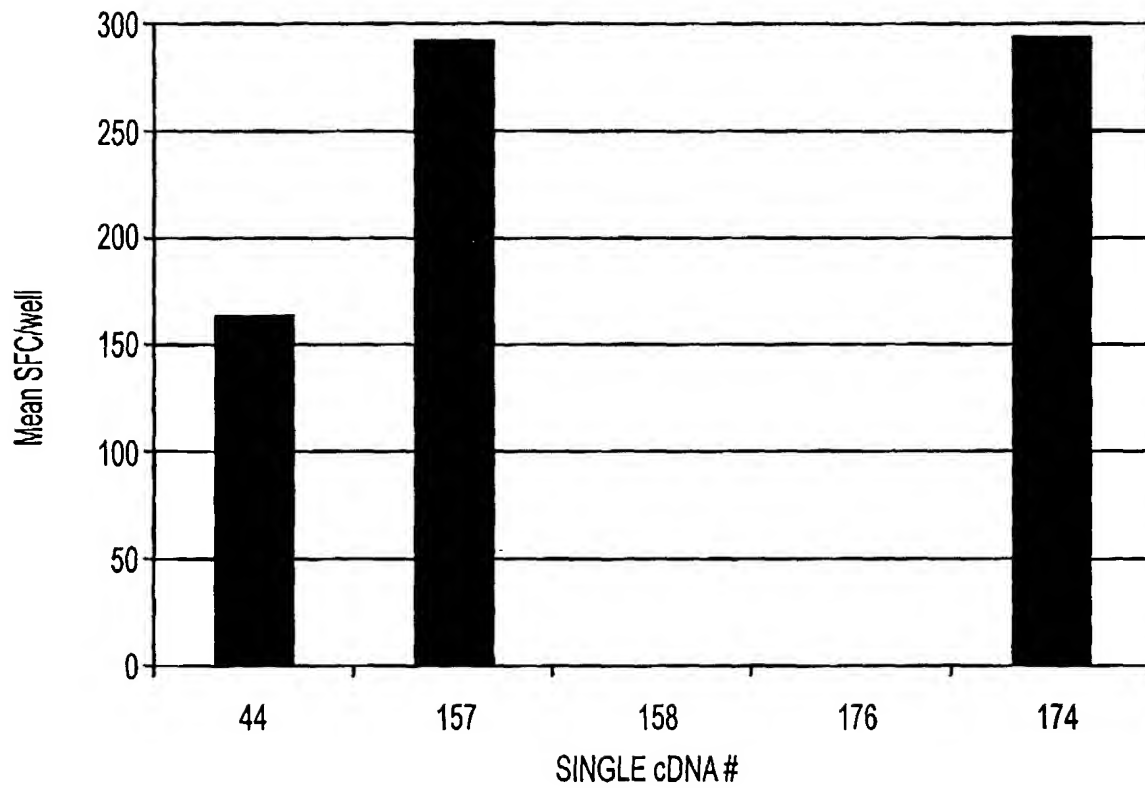


FIG. 4

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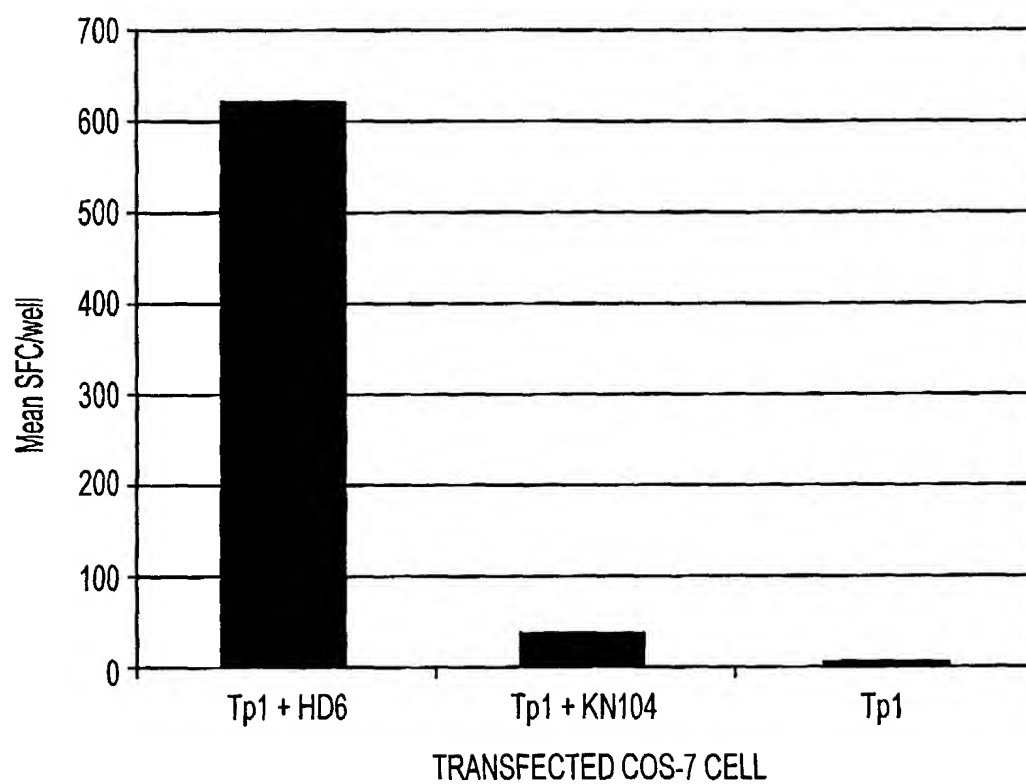


FIG. 5

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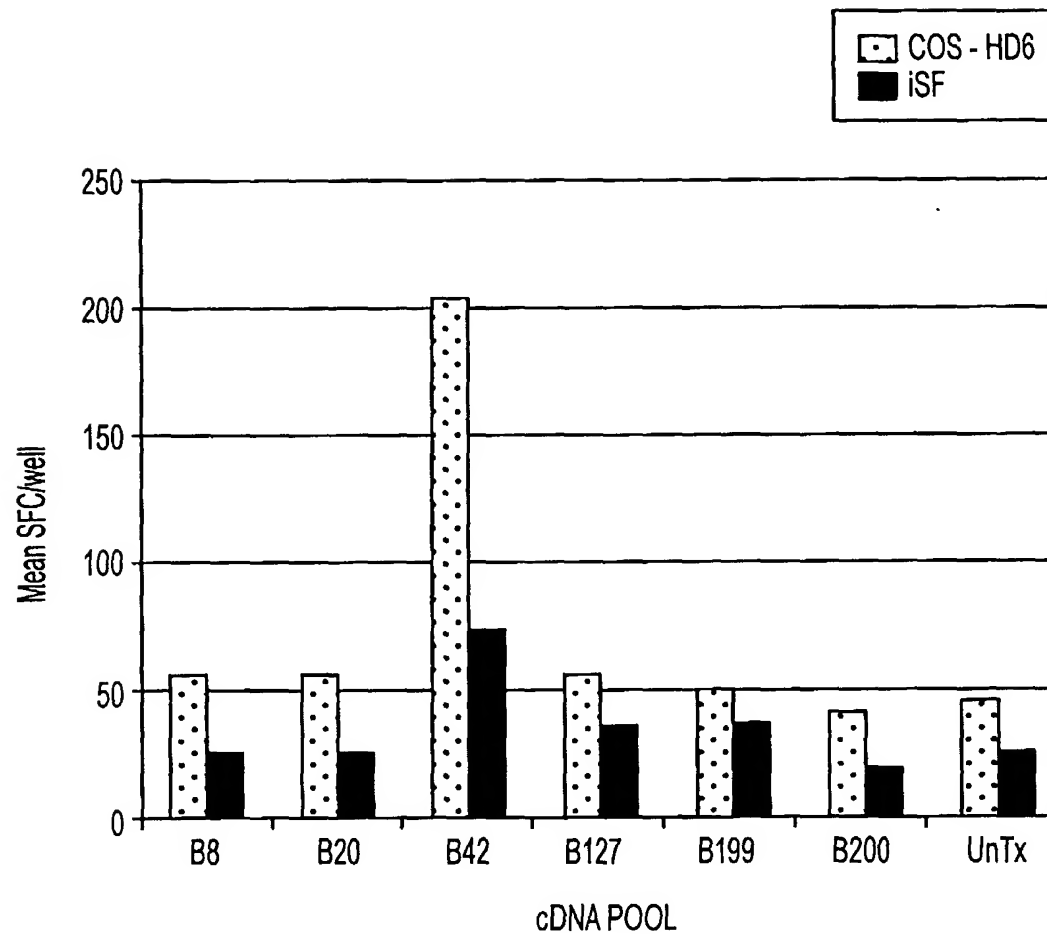


FIG. 6

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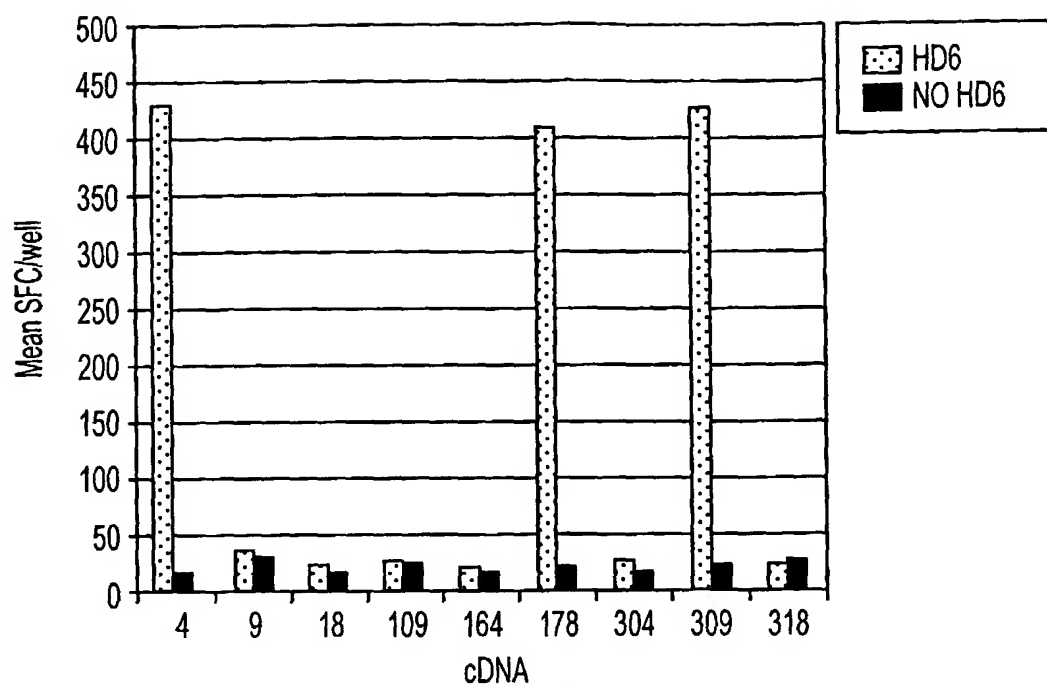


FIG. 7A

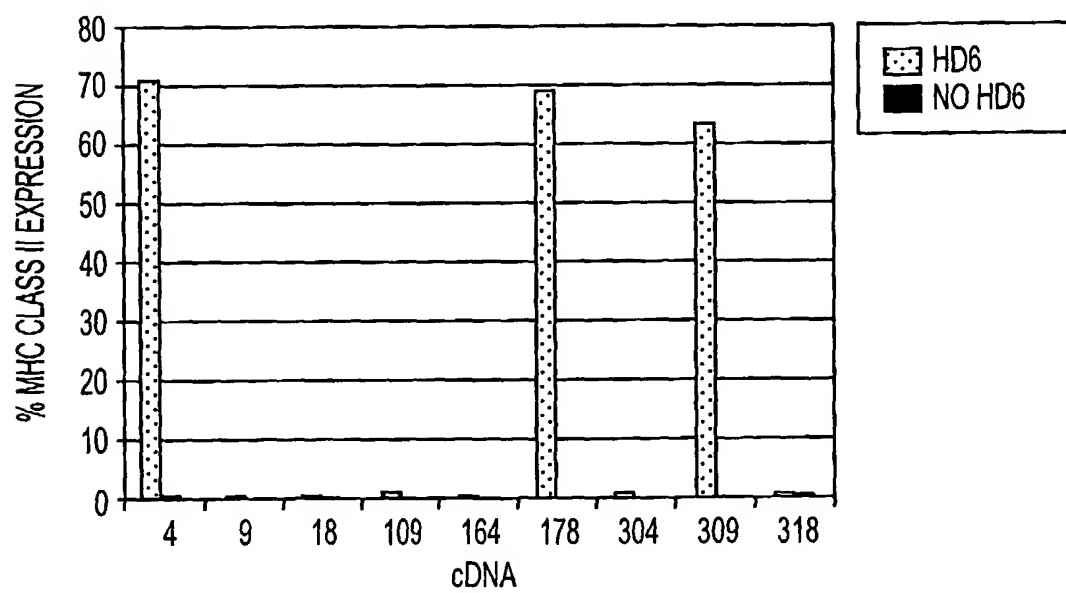


FIG. 7B

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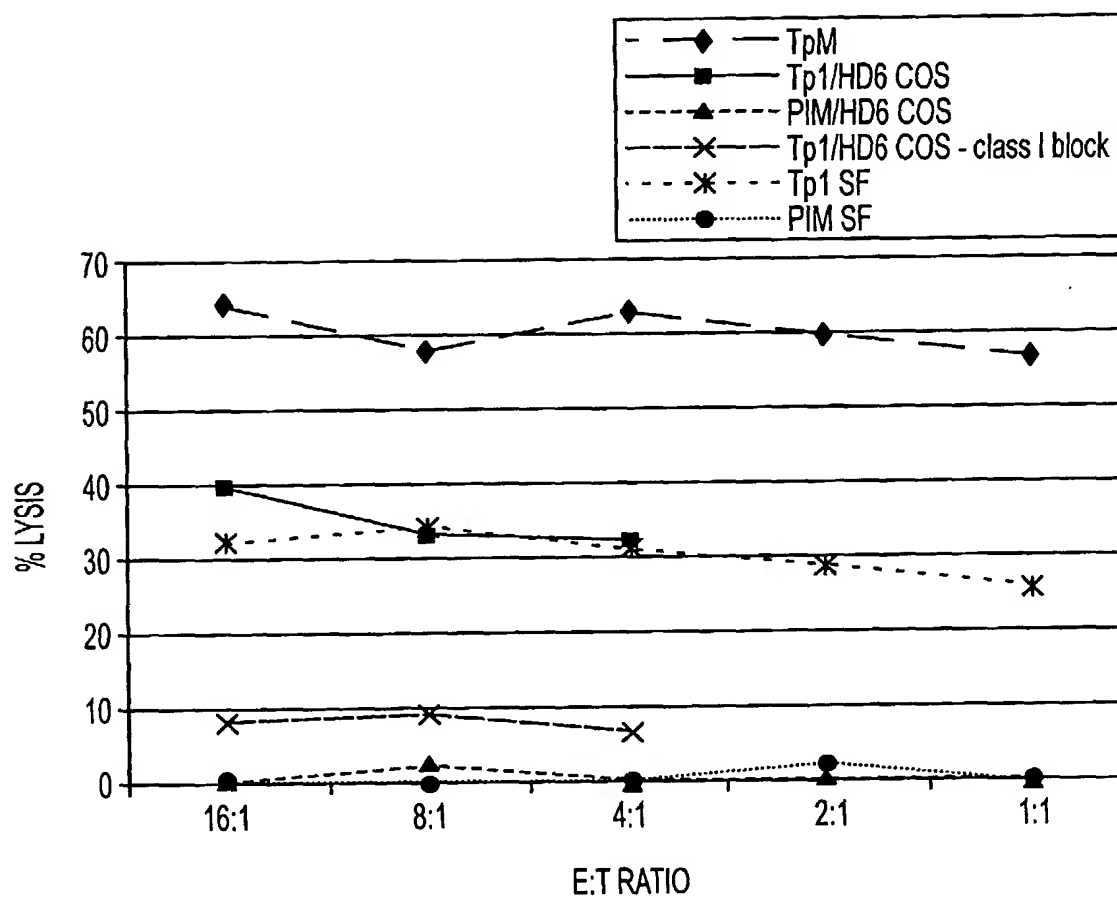


FIG. 8

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	10	20	30	40	50	60	70
80							
Tp1 ORF	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del1	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del2	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del3	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del4	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del5	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEEELKP	PSALEDELKK	REBESRKRME	EMQKEILEKK
Tp1 Del6	MRVKKVLLYT	LPVVGILLAG	SLIIFNFVRK	RPEKEE...	.....	.....	.....
	90	100	110	120	130	140	150
Tp1 ORF	LEKREKEVVD	EFAKHLKKPE	ERLPKIILTL	DSGFPTVDPI	TYTSGVYMVA	VSKTTFTSDS	DLVDFTHTL
Tp1 Del1	LEKREKEVVD	EFAKHLKKPE	ERLPKIILTL	DSGFPTVDPI	TYTSGVYMVA	VSKTTFTSDS	DLVDFTHTL
Tp1 Del2	LEKREKEVVD	EFAKHLKKPE	ERLPKIILTL	DSGFPTVDPI	TYTSGVYMVA	VSKTTFTSDS	DLVDFTHTL
Tp1 Del3	LEKREKEVVD	EFAKHLKKPE	ERLPKII...	DSGFPTVDPI	TYTSGVYMVA	VSKTTFTSDS	DLVDFTHTL
Tp1 Del4	LEKREKEVVD	EFAKHLKKPE	ERLPKII...	.....	.....	.....	.....
Tp1 Del5	LEKREKEVVD	EFAKHLKKPE	ERL.....	.....	.....	.....	.....
Tp1 Del6	.....	.....	.....	.....	.....	.....	.....
	170	180	190	200	210	220	230
Tp1 ORF	FGGKTYTIKP	IEATMATSIA	FAADPGFCYF	LLIPGPDSPK	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF
Tp1 Del1	FGGKTYTIKP	IEATMATSIA	FAADPGFCYF	LLIPGPDSPK	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF
Tp1 Del2	FGGKTYTIKP	IEATMATSIA	FAADPGFCYF	LLIPGPDSPK	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF
Tp1 Del3	.....	.....	.....	.....	.....	.....	.....
Tp1 Del4	.....	.....	.....	.....	.....	.....	.....
Tp1 Del5	.....	.....	.....	.....	.....	.....	.....
Tp1 Del6	.....	.....	.....	.....	.....	.....	.....
	250	260	270	280	290	300	310
Tp1 ORF	APPGVKPEAP	TPTPTTITPS	VPPTIPTPIT	PSAPPTTPPT	GLNFNLTVQN	KFMIGSQEVK	LNITHEYEGV
Tp1 Del1	APPGVKPEAP	TPTPTTITPS	VPPTIPTPIT	PSAPPTTPPT	GLNFNLTVQN	KFMIGSQEVK	LNITHEYEGV
Tp1 Del2	A.....	.....	.....	.....	.....	.....	.....
Tp1 Del3	.....	.....	.....	.....	.....	.....	.....
Tp1 Del4	.....	.....	.....	.....	.....	.....	.....
Tp1 Del5	.....	.....	.....	.....	.....	.....	.....
Tp1 Del6	.....	.....	.....	.....	.....	.....	.....
	330	340	350	360	370	380	390
Tp1 ORF	GSFTPTSFSI	GDLPQTGLPV	NQTVDTIVVY	FHRVTMGEPV	GIPLIVLIFY	KNQSRKYLNK	GNGNWEESKA
Tp1 Del1	GSFTPTSFSI	GDLPQTGLPV	NQTVDTIVVY	FHRVTMGEPV	GIPLIVLIFY	KNQSRKYLNK	GNGNWEESKA
Tp1 Del2	.....	.....	.....	.....	.....	.....	.....
Tp1 Del3	.....	.....	.....	.....	.....	.....	.....
Tp1 Del4	.....	.....	.....	.....	.....	.....	.....
Tp1 Del5	.....	.....	.....	.....	.....	.....	.....
Tp1 Del6	.....	.....	.....	.....	.....	.....	.....
	410	420	430	440	450	460	470
Tp1 ORF	DSIFNDFVTV	NLSRRSDYYR	NGTGTSEIEQ	TLDNMVYVEP	DTPCAGWTTY	IHKLEEGGEG	GIEKPFQIRQ
Tp1 Del1	DSIFNDFVTV	NLSRRSDYYR	NGTGTSEIEQ	TLDNMVYVEP	DTPCAGWTTY	IHKLEEGGEG	GIEKPFQIRQ
Tp1 Del2	.....	.....	.....	.....	.....	.....	.....
Tp1 Del3	.....	.....	.....	.....	.....	.....	.....
Tp1 Del4	.....	.....	.....	.....	.....	.....	.....
Tp1 Del5	.....	.....	.....	.....	.....	.....	.....
Tp1 Del6	.....	.....	.....	.....	.....	.....	.....
	490	500	510	520	530	540	550
Tp1 ORF	FPMGKVSIVN	VYGKNDPELS	YAPSIFSVIR	EDGIQIFYVR	AYSQYLLDSS	VNPQNLPQKL	NTL*.....
Tp1 Del1	FPMGKVSIVN	VYGKNDPELS	YAPSIFSVIR	EDGIQIFYVR	AYSQYLLDSS	VNPQNLPQKL	NTL*.....
Tp1 Del2
Tp1 Del3
Tp1 Del4
Tp1 Del5
Tp1 Del6

FIG. 9

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	200	210	220	230	240
Tp1.1	mPGPDSKP	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF	NRLPKGVEIP
Tp1.2					
Tp1.3					
Tp1.4	mPGPDSKP	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF	NRLPKGVEIP
Tp1.5					
Tp1.6	mPGPDSKP	IFFKNDGDKF	LRCVGYPKVK	EEMLEMATKF	NRLPKGVEIP
	250	260	270	280	290
Tp1.1	APPGVKPEAP	TPTPTTIT			
Tp1.2	mP	TPTTITPS	VPPTIPTPIT	PSAPPTTPPT	GLNFNLTIVQN
Tp1.3					
Tp1.4	APPGVKPEAP	TPTTITPSVP	PTIPTPITPS	APPTTPPTGL	NFNLTIVQNKF
Tp1.5	mP	TPTTITPSVP	PTIPTPITPS	APPTTPPTGL	NFNLTIVQNKF
Tp1.6	APPGVKPEAP	TPTTITPSVP	PTIPTPITPS	APPTTPPTGL	NFNLTIVQNKF
	300	310	320	330	340
Tp1.1					
Tp1.2	KFMIGSQEVK	LNITHEYEGV	YEAHKYFI		
Tp1.3		mGV	YEAHKYFIER	GSFTPTSFSI	GDLPQTGLPV
Tp1.4	KFMIGSQEVK	LNITHEYEGV	YEAHKYFIER	GSFTPTSFSI	GDLPQTGLPV
Tp1.5	KFMIGSQEVK	LNITHEYEGV	YEAHKYFIER	GSFTPTSFSI	GDLPQTGLPV
Tp1.6	KFMIGSQEVK	LNITHEYEGV	YEAHKYFIER	GSFTPTSFSI	GDLPQTGLPV
	350	360	369		
Tp1.1					
Tp1.2					
Tp1.3	NQTVDTIVVY	FHRVTMGEPV	GIPLIVLIF		
Tp1.4					
Tp1.5	NQTVDTIVVY	FHRVTMGEPV	GIPLIVLIF		
Tp1.6	NQTVDTIVVY	FHRVTMGEPV	GIPLIVLIF		

FIG. 10

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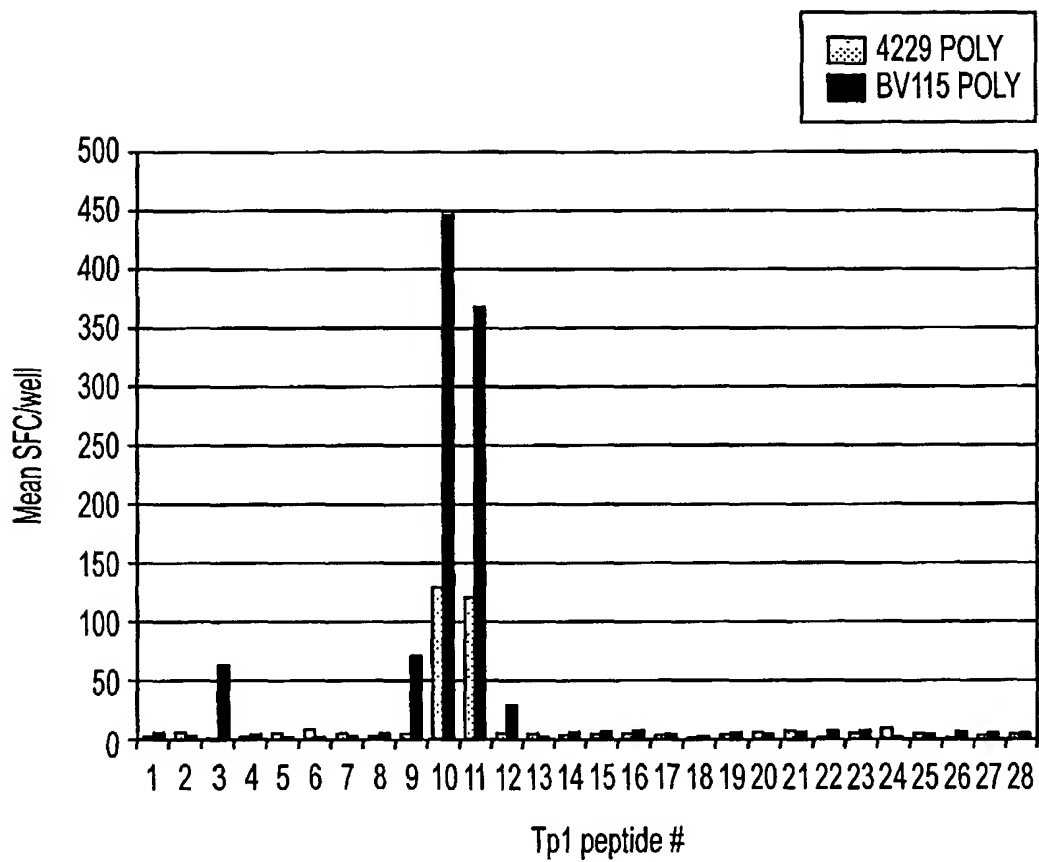


FIG. 11

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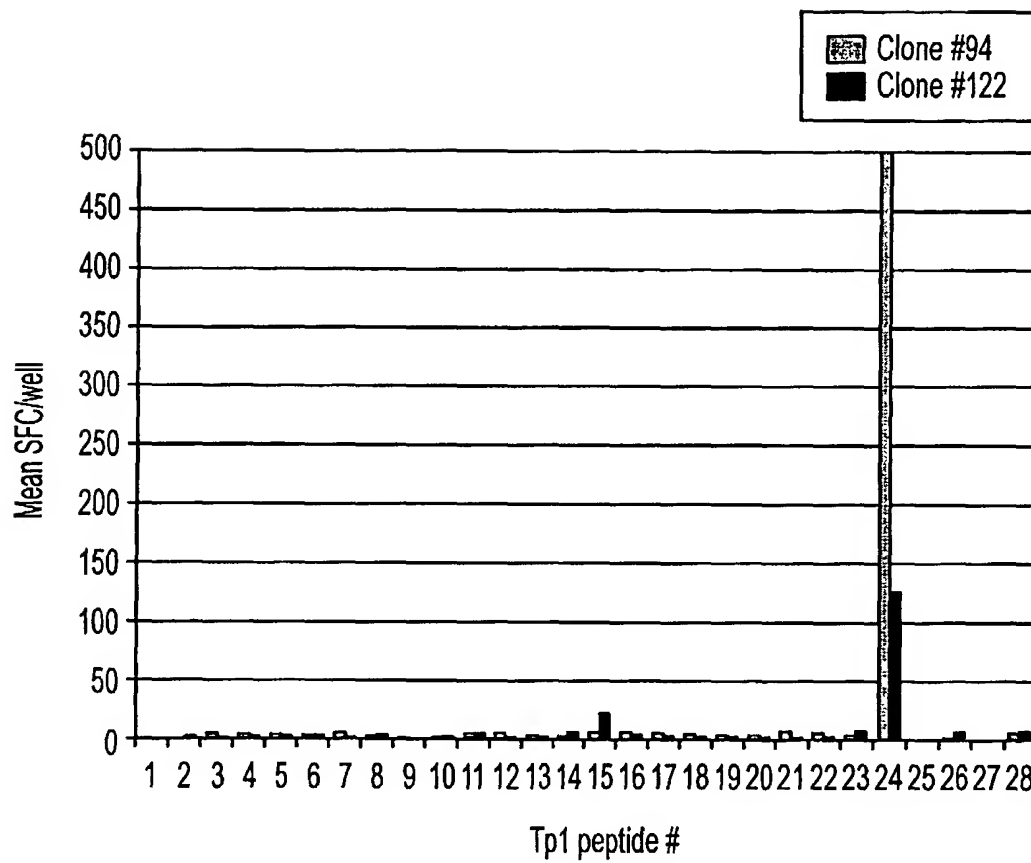


FIG. 12

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	10	20	30	40	50	60
Tp1Muguga	MRVKKVLLYTLPPVVGILLAGSLIIFNFVRKRPEKEEELKPPSALEDELKKREEEESRKRME					
Tp1Marikebuni	MRVKKVLLYTLPPVVGILLAGSLIIFNFVRKRPEKEEELKPPSALEDELKKREEEESRKRME					
	10	20	30	40	50	60
	70	80	90	100	110	120
Tp1Muguga	EMQKEILEKKLREGKKALEELEKREKEVVDEFKHLKKPEERLPKIIILTLD SGFP TVDPI					
Tp1Marikebuni	EMQKEILEKKLREGKKALEELEKCEKEMVDEFKHLKKPEERLPKIIILTLD SGFP TVDPI					
	70	80	90	100	110	120
	130	140	150	160	170	180
Tp1Muguga	TYTSGVYMVAVSKTTFTSDSDLVDFTHTLLGIKFLVTGVQFGGKTYTIKPIEATMATSIA					
Tp1Marikebuni	TYTSGVYMVAVSKTTFTSDSDLVDFTHTLLGIKFLVAGVQFGGKTYTIKPIEATMATSIA					
	130	140	150	160	170	180
	190	200	210	220	230	240
Tp1Muguga	FAADPGFCYFLLIPGPD SKPIFFKNDGDKFLRCVGYPKVKEEMLEMATKFNRLPKGVEIP					
Tp1Marikebuni	FAADPGFCYFLLIPGPD SKPIFFKNDGDKFLRCVGYPKVKEEIIEMATKFNRLPKGVEIP					
	190	200	210	220	230	240
	250	260	270	280	290	300
Tp1Muguga	APPGVKPEAPTPTPTTITPSVPPTIPTPTPSAPPTTPPTGLNFNLTVQNKFMIGSQEVK					
Tp1Marikebuni	APPGVKPEAPTPTPTTITPSVPPTIPTPTPSAPPTTPPTGLNFNLTVQNKFMVGSQEVK					
	250	260	270	280	290	300
	310	320	330	340	350	360
Tp1Muguga	LNITHEYEGVYEAHKYFIERGSFTPTSFSGDLPQTGLPVNQTVDTIVVYFHRVTMGEPV					
Tp1Marikebuni	LNITHEYDGVYEAHKYFIEKGRFTPTSFSGADPQTGLPVNQTVDTIVVYFHRVTMGEPV					
	310	320	330	340	350	360
	370	380	390	400	410	420
Tp1Muguga	GIPLIVLIFYKNQSRKYL NKGNGNWEESKALLFREELDYLD SIFNDFVTVNLSRRSDYYR					
Tp1Marikebuni	GIPLIVLVFYKNQSTKYLNKGNGNWEESKALLFREELDFLDSMFNGYVTVNLSRRSDYYR					
	370	380	390	400	410	420
	430	440	450	460	470	480
Tp1Muguga	NGTGTSEIEQTLDMNVYVEPDTPCAGWTTYIHKLEEGGEGGIEKPFQIRQLWFSKQKFDI					
Tp1Marikebuni	NGTGTSEIEKTLDMNVYVEPDT PCLGWTTYIHKLEEGGEGGIEKPFQIRQLWFSKQKFDI					
	430	440	450	460	470	480
	490	500	510	520	530	540
Tp1Muguga	FPMGKVSIVNVYGKNDEPLSYAPSIFSVIREDDGIQIFYVRAYSQYLLDSSVNPQNL POKL					
Tp1Marikebuni	FPMGKVSIVNVYGKNDEPLSYAPSIFSVIREDDGIQIFYVRAYSQYLLDSSVNPQNL POKL					
	490	500	510	520	530	540
Tp1Muguga	NTL					
Tp1Marikebuni	TAE					

FIG. 13

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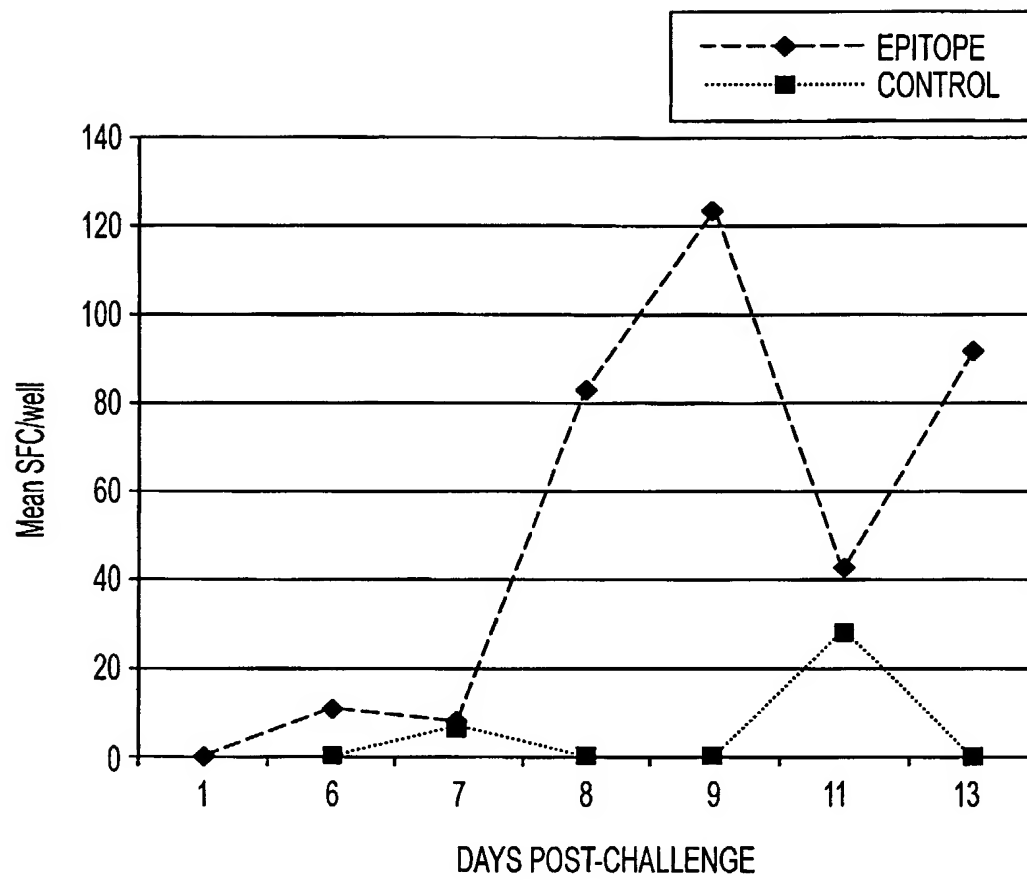


FIG. 14

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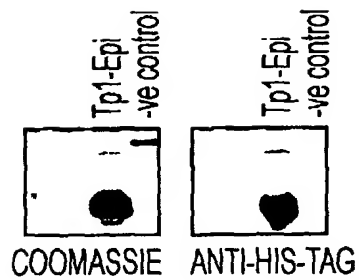


FIG. 15A

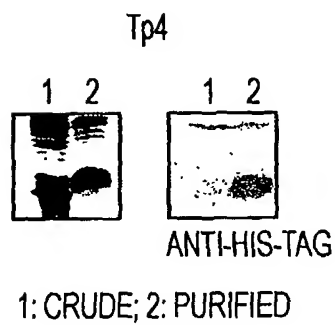


FIG. 15B

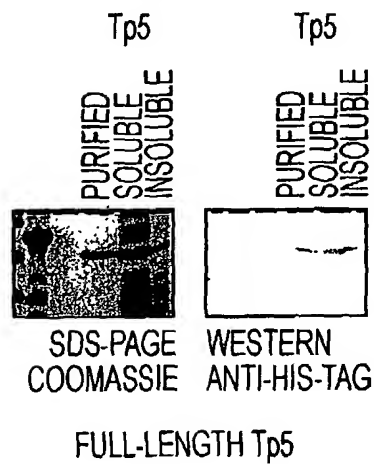


FIG. 15C

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FIG. 16Aa

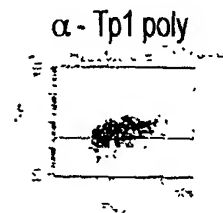


FIG. 16Ab

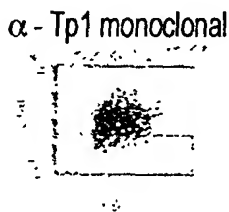


FIG. 16Ac

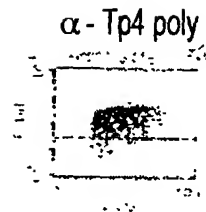


FIG. 16Ad

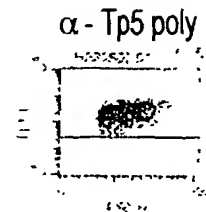


FIG. 16Ae

ANTIBODY	% OF T. PARVA INFECTED CELLS STAINED
Anti-Tp1 polyclonal Ab	78
Anti-Tp1 monoclonal Ab	85.96
Anti-Tp4 polyclonal Ab	92.52
Anti-Tp5 polyclonal Ab	96.04
Control	0.32

FIG. 16B

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TP1	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
Kakuzi521	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
NyairoIL02	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
NyairoIL17	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
Kakuzi521	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
Buffalo7344c1	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
KilifiKL2	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
D409TpMariakani	MATSI	AFAADPGFCYFLLIPAP--	KPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
KilifiBR305	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
KilifiKL1	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
Zambia2	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
Uganda	MATSI	AFAADPGFCYFLLIPGPD	SKPIFFKNDGDKFLRCVGP	PKVKEEMLEMATKFNRLPKGVEIPAPPGVK
TP1	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
Kakuzi521	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
NyairoIL02	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
NyairoIL17	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
Kakuzi521	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
Buffalo7344c1	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
KilifiKL2	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
D409TpMariakani	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
KilifiBR305	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
KilifiKL1	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
Zambia2	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI
Uganda	PEATPTPTTITPSV	PPTIPTPTPSAPP	TTPTTGLNFNLTVQNKFMIGSQ	EVKLNITHEYEGVYEAHKYFI

FIG. 17

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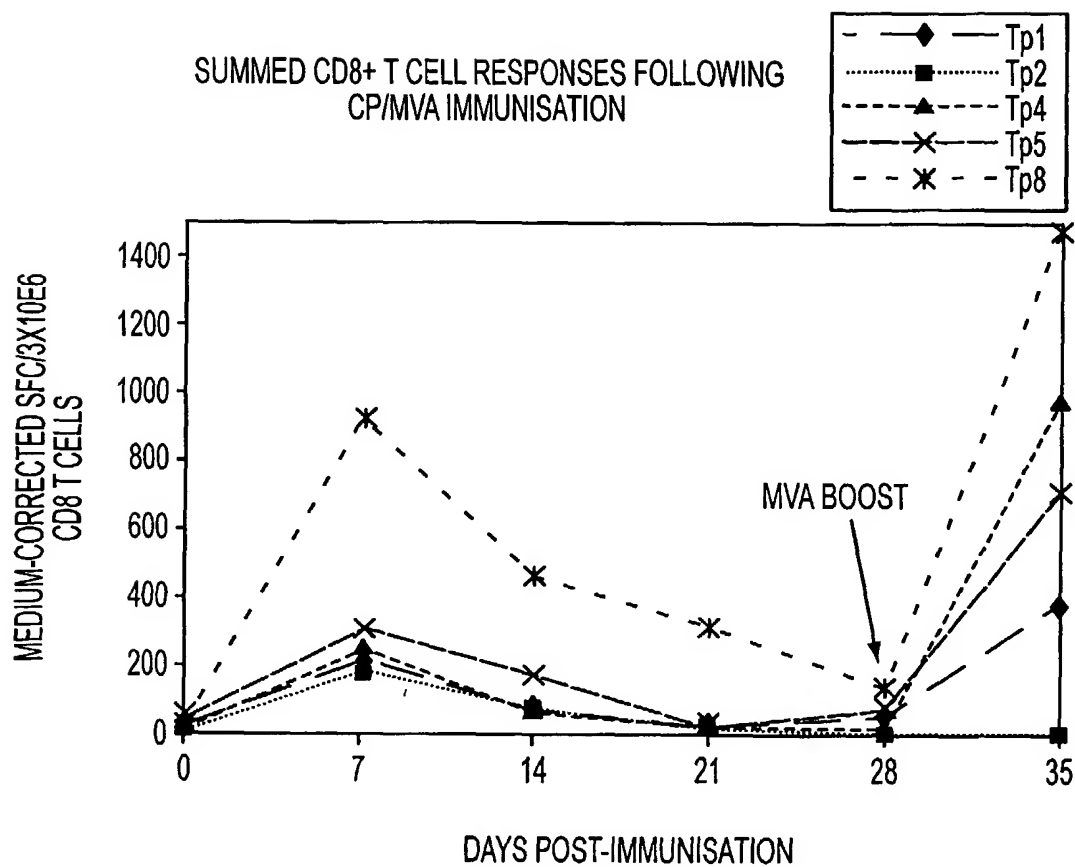


FIG. 18

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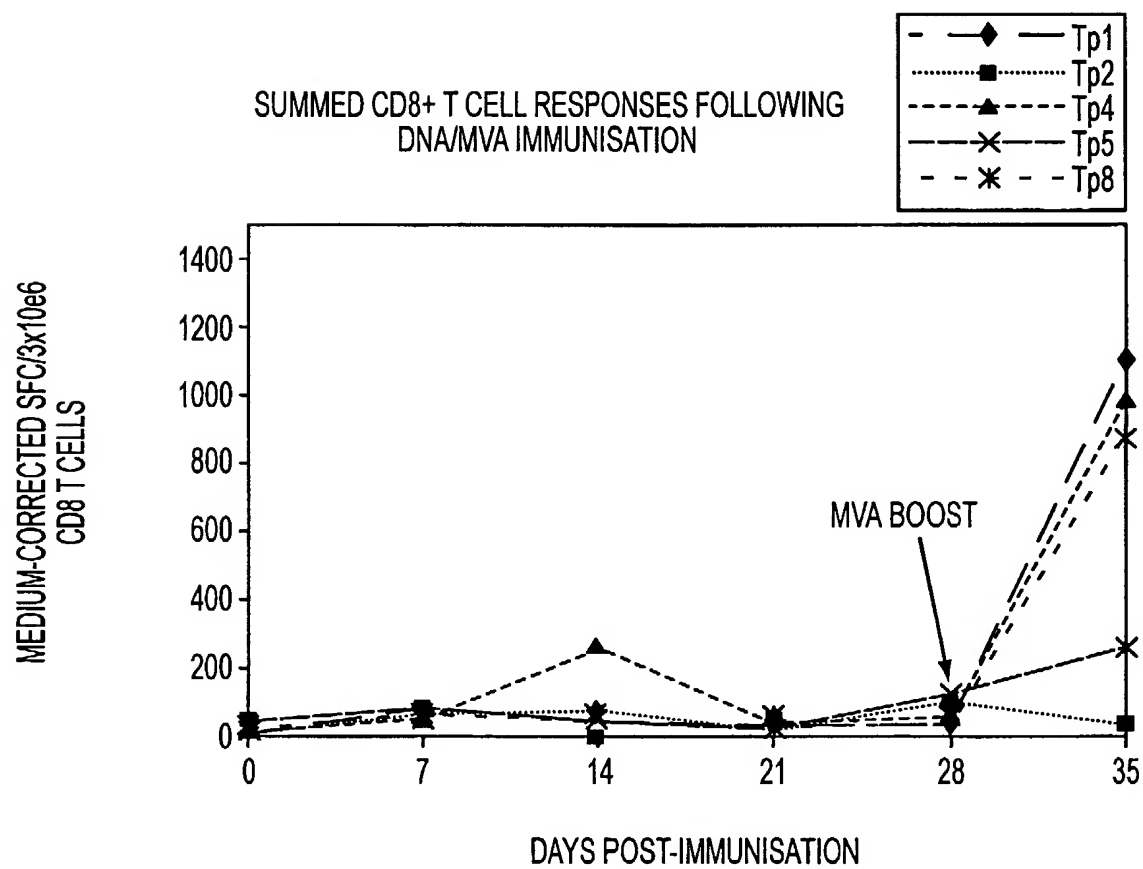


FIG. 19

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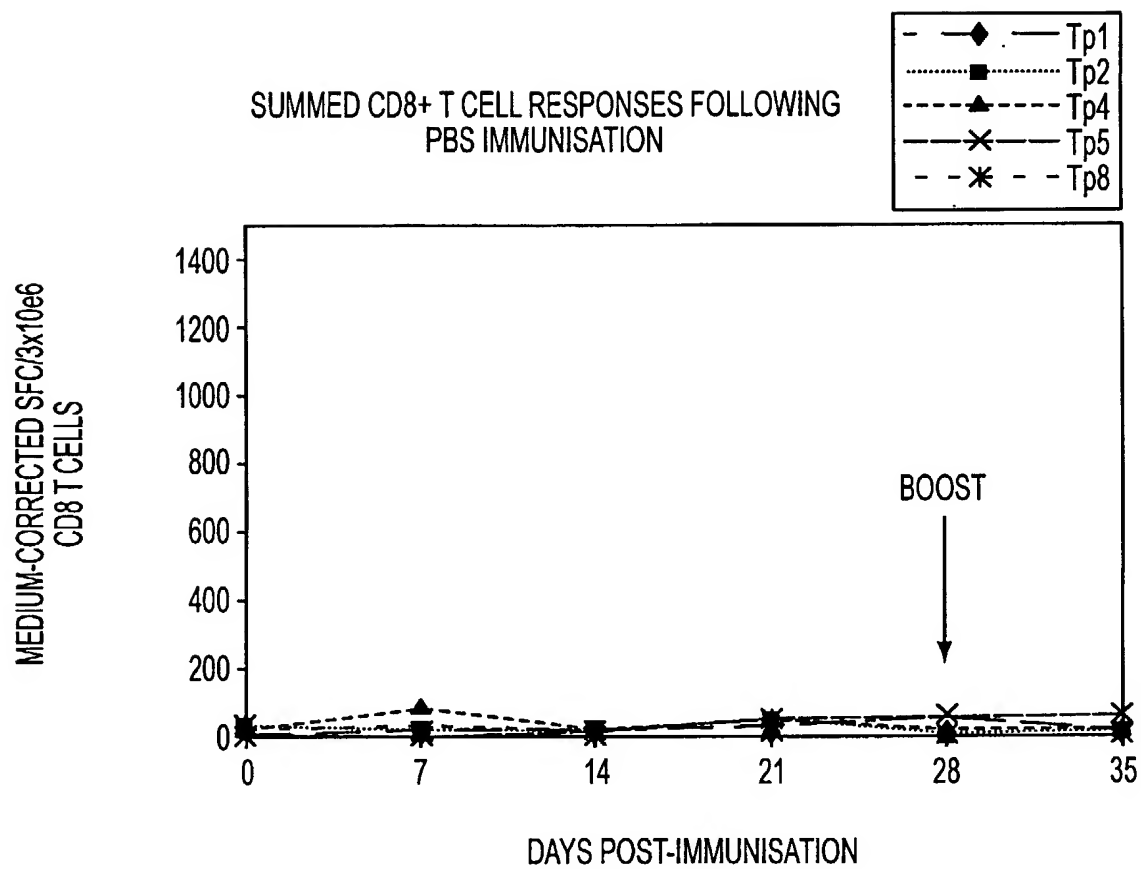


FIG. 20